PEER REVIEWED

Using an Expert Simulated Patient Strategy to Teach
in the Low Vision Optometry Clinic

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Abstract

An innovative expert simulated patient (ESP) strategy provides authentic, highly interactive clinical learning experiences even when patients fail to attend appointments at university optometry teaching clinics for low vision patients. The ESP approach uniquely simulates an actual case history while the expert instructor optometrist transitions in and out of patient role-play, providing formative feedback to students on history-taking, examination techniques, knowledge and professionalism. With significant benefits for clinical learning, clinic administration and staffing cost-effectiveness, the ESP approach proved highly transferable to virtual environments, invaluable during the pandemic. This paper describes 3 years of successes and challenges of an ESP strategy.

Key Words: clinical optometry, optometry clinic teaching, expert simulated patient, low vision clinic, optometric skills education

Introduction

Clinical experience is important in healthcare teaching, including optometry, to ensure future practitioners have professional competencies.[1-4] Face-to-face patient consultations enable optometry students to consolidate their theoretical knowledge and show how they can apply it to authentic experiences with patients.[5-7] Opportunities for clinical experience are provided through external placements in private practices, hospitals and organizations, and internal placements at the University of New South Wales Optometry Clinic (UNSW-OC). In the latter, qualified experienced optometrists supervise senior optometry students as they provide free optometric examinations to patients who are often referred with complex visual conditions. These authentic clinical interactions ensure high-quality learning experiences for students, while the one-on-one or similar ratios support high-quality patient care. In addition to primary care clinics, the UNSW-OC provides clinics in advanced care fields such as low vision (LV), pediatrics, ocular pathology, color vision and contact lenses. These clinics enable patients to be assessed by optometrists with knowledge, experience, research-based expertise and access to specialized equipment in distinct areas of optometry. The UNSW LV clinic (the main context for this paper) caters at an expert level to the specific needs of people with vision impairment. Patients are referred from across Australia and overseas.

Teaching clinics present notable management and pedagogical challenges to ensuring equitable and adequate learning opportunities for all students, especially in advanced care fields. The naturally uncontrollable aspects of this teaching context are exacerbated when patients are “no-shows,” i.e., canceling with late notice or missing scheduled appointments. These unplanned shortfalls in the patient pool impact student learning opportunities, clinic staff costs, and satisfaction and long-term commitment among sessional clinic instructors. Since 2019, this complex situation has been addressed at UNSW-OC by the development and use of an expert simulated patient (ESP) strategy. This is a protocol whereby optometry educators use their expert knowledge of the field alongside access to detailed patient case

histories to role-play a specific patient for a student in a clinical learning environment. The ESP strategy is an innovative extension of existing clinical teaching concepts. For example, “expert patient” or “patient as teacher” approaches use patients who are knowledgeable about their own diagnosis and treatment to provide feedback to students.[8,9] The “simulated/standardized patient” model uses volunteer or paid actors trained to act as real patients in simulating symptoms or problems in clinical education settings and to give professional feedback to students.[10-12] Though influenced by these models, the ESP strategy differs by training supervisors to role-play specific real patients, including those patients’ relevant complexities. This provides highly authentic clinical learning and enables seamless continuity in teaching in the event of late cancellations or no-shows.

By early 2020, the ESP strategy was in place at UNSW-OC and already indicating successful outcomes. Students could be effectively assessed even in “no patient” situations, and students and staff were reporting satisfaction. Then, as happened across the world,[13] UNSW-OC had to be closed because of the COVID-19 pandemic, and the university shifted to online learning. For approximately 2 years, until mid-2022, the clinic experienced only short periods of “normal” functioning when personal protective equipment was used under strictly enforced social distancing.[14] As with other universities, the clinic’s closure naturally put at risk optometry students’ learning and graduation.[13,14] Students seemed unlikely to achieve the required clinical experience or receive effective assessment of their practical clinical knowledge, which would impact negatively on final course grades. Fortunately, the ESP strategy provided an outstanding mechanism with which to give students authentic clinical learning experiences even when all learning activities had to be mediated online. The ESP approach met the requirements for assessment of face-to-face skills and ensured students were ready to deliver face-to-face patient care as soon as the clinic re-opened. The ESP approach quickly became the clinic’s default approach throughout the closures necessitated by Sydney’s lockdowns in 2020 and 2021, enabling all students to have clinical experiences and assessments and graduate as planned.

This paper describes both the developmental thinking behind the design of the ESP strategy and some of its successes and challenges in the past 4 years, including in virtual settings during periods of online teaching. The outcomes suggest this approach could be used to great advantage in other clinical optometry teaching contexts.

The Constraints of Optometry Teaching Clinics for Advanced Care Fields

University optometry clinics worldwide share the need to balance at least 6 key components of effective functioning: safe patient care, excellent education that meets national/international standards for accredited competencies, employment and development of professional optometrists working as sessional/contracted staff, purchase and use of specialized equipment, full compliance with all university policies and procedures relevant to student learning in professional clinical contexts, and maximizing student well-being. Ensuring that students experience advanced care clinics is essential from both educational and professional perspectives. A survey of optometrists providing gerontology and LV care found up to one-third of respondents provided such services after having experienced their teachers’ specific knowledge, passion and empathy in these fields.[15] Conversely, optometrists who reported lacking the confidence to provide gerontology and LV services had not experienced any university learning with elderly or LV patients. It is thus in both the profession’s and the community’s best interests to facilitate student learning in diverse advanced care clinics.

As a teaching clinic, UNSW-OC is constantly dealing with management and pedagogical challenges. Ongoing effort ensures the availability of multiple highly skilled supervisors (instructors) who are appropriately expert in their specific field(s) of optometry and in teaching. These supervisors must be professional optometrists who can effectively guide, instruct, assess and inspire students to meet patients’ specific needs and complexities.

The clinic's employment strategy must ensure maximum patient care and safety through low patient-to-supervisor and supervisor-to-student ratios. At UNSW-OC, the ratios in most clinics are one patient per student, two to three patients per supervisor, and two to four students per supervisor. This gold-standard teaching model is naturally expensive as it must constantly be adjusted based on the limited availability of optometry professionals, and it must ensure their professional development in advanced care clinical teaching skills.

In the UNSW-OC advanced care LV clinic, patients referred by their home optometrist usually have complex conditions and circumstances and have often traveled long distances. Having students work in pairs and focus on teamwork capitalizes on these special learning opportunities. Clinic managers pay careful attention to patient quotas and logs to create equitable access to a variety of cases, diagnoses and case difficulties for all students. Nevertheless, patient case histories, diagnoses and treatments are unpredictable, and many aspects of patient consultations remain unforeseeable, including final diagnosis, case complexity and outcome.

Patient attendance at LV clinic appointments is a key issue. The older age and comorbidities of many patients with LV and the added complications around COVID-19 since 2020 result in an increased likelihood that in each scheduled LV clinic at least one patient will cancel late or fail to arrive. As many patients rely on others to transport and accompany them, appointments canceled at the last minute can rarely be filled. In our LV clinic context, this can mean an annual no-show rate of up to 38% (n = 150) of scheduled patients. The logistical challenge of coordinating expert staff, specialty equipment and students makes rescheduling student-patient experiences difficult. Delivering additional tutorials can provide students more contact with supervisors but does not replace patient consultations. No-shows thus pose a serious problem in clinical teaching, with many students potentially missing authentic learning experiences and supervisors' formative feedback on clinical skills before summative examinations. Optometry students are likely to have anxiety in clinical environments, heightened by clinic schedules and fears of not meeting expectations or being unprepared.[6] Patient no-shows and consequent lost learning opportunities add to their stress burdens. No-shows also result in financial losses for the clinic because teaching supervisors already on site must still be paid.

Clinical Teaching: the Scope of Patient Role-plays

From the pedagogical perspective, an ongoing challenge in clinics is to ensure optometry supervisors can inspire by giving detailed feedback on students' clinical skills, techniques, use of specialty equipment and behavior as optometry professionals.[6] Given the importance of evidence-based practice and clinical-thinking and reasoning, supervisors must facilitate development of students' competence in clinical judgment within complex professional practice through conscious decision-making.[4,16,17] In this context, the success of the objective structured clinical examination (OSCE) in assessing clinical skills is well-known.[18] As many OSCEs require human "targets," optometry has adopted the use of both simulated and standardized patients common in other healthcare professions. These actors or volunteers are trained to present the signs and symptoms of real cases, give consistent verbal and behavioral responses to the person doing the examination/consultation, and provide feedback enabling standardized assessment.[12,19-21] The UNSW School of Optometry and Vision Science has long used simulated patients in OSCE-style examinations.

The conventional method of using simulated or standardized patients in clinical teaching and assessment is to identify paid or volunteer healthy individuals (often senior students in the same or related fields) and train them to act as patients. They learn scripts, lists of symptoms, particular case histories and ways to respond to students' questions.[21,22] However, this approach generally adds complexities for clinic managers. Honoraria or wages need to be paid to volunteers, actors or casual staff, and additional administration costs may be incurred. Also, the quality of training given to the simulated patients influences the overall impact of the learning experience, and the well-being of the

actors/volunteers must always be considered.[23]

Clinics can address some of these complexities by utilizing technology. Simulations have thus become more accessible worldwide in education contexts, even pre-pandemic, with digital interactive simulations, or virtual patients, being used to train clinical reasoning in medicine, nursing and optometry. Good design requires relevancy, support for a case's complex or difficult aspects, interactivity and effective assessment.[24] However, developing and maintaining technology-based virtual simulations remains costly, and their effectiveness as teaching tools is not fully proven. For example, one study of clinical decision-making found optometry students generally overestimated their skills in selecting the appropriate question or test, recognizing critical symptoms or signs, or appreciating referral urgency, but could not improve their self-assessment through experiences with virtual patients.[25]

Developing and Implementing the UNSW-OC Expert Simulated Patient Strategy

The ESP strategy is an approach whereby the simulated patient is role-played by an expert optometry professional who is also the supervisor (teacher, instructor) in the clinical optometry education context. The ESP acts physically as the patient, for example, allowing physical examinations of eyes and vision and responding to students' questions. The ESP uses an actual patient's record card (anonymously extracted from the clinic's comprehensive database) as the script to guide every part of the consultation authentically. As required by the specific teaching context and the individual student, the ESP strategy allows the instructor to shift in and out of the patient role as necessary, enabling the ESP to simultaneously provide and formatively assess the clinical experience.

Pilot testing of the ESP strategy in the LV clinic led to a decision to stay faithful to a single patient's case history. Initially the lead clinical supervisor constructed each case scenario for the relevant ESP by combining relevant aspects of different patients' case histories to create an ideal patient in terms of the clinical learning experience it would afford students. Students completed a LV record card on the constructed patient and were given feedback on their competency in the required tasks. However, students could not use these experiences as case reports because the artificial construction meant some patient data was mismatched, which could confuse students with limited clinical experience and no authentic explanations. While mismatching can happen with real patients, authentic explanations are possible. For example, a real patient with LV might be prescribed an inappropriate strength magnifier because they prefer its portable design or cheaper cost.

As the pilot testing showed constructed cases made the student-patient clinical encounter less authentic, we shifted the ESP protocol toward using a very close rendering of the history of an existing patient, based on that patient's record card, recently examined in the clinic. This approach was immediately found to be more effective for both the ESP/instructor and the student, and has become the norm. Role-playing a specific patient is therefore the crux of the ESP teaching strategy. The patient is not created based on the professional's experience, nor are different patient histories merged, nor are comorbidities simplified. Instead, the ESP sticks to the case history as recorded, including any noted behaviors, concerns, anxieties and medical and genetic history. The de-identified patient's record card becomes the script for the ESP during the clinical examination by the student. In response to the student's case history and examination questions, the ESP describes the real patient's vision, current life situation and clinical results. Key facts are never fabricated or constructed, keeping the simulation more authentic. For example, if the actual patient reported having left their medical history at home, the student would have to navigate the patient's history and examination without a list of conditions or medications, an authentic scenario. The privacy and confidentiality protocols required of staff and students for ESPs are the same as for real patients, and the patient whose case history is used always remains anonymous to the student.

In terms of clinical professional training, simulations must authentically replace all aspects of the live

patient-optometrist interaction. For example, experienced optometrists know that real LV patients may forget what medication they are taking, may be confused about comorbidities (or fail to mention them until late in a consultation when they are more trusting of the optometrist), and may be highly anxious about the consultation's outcomes (for example, no longer meeting requirements for a driver's license).[26] The ESP protocol allows these attributes to be included authentically. However, while live patients aid objective training in technical skills, simulated patients cannot substitute some physical attributes. For example, clinical techniques such as trial frame refraction and pathology screening can be practiced in simulations, but little can replace the learning of refraction or viewing the posterior pole of an older eye with its media changes and smaller pupils. Where the real patient's signs, symptoms and data differ from the ESP's physical attributes (which is to be expected), the use of an authentic patient's records allows the ESP to provide verbal feedback and coaching in relation to the recorded results for the real patient. For example, students might indicate their intention to conduct ophthalmoscopy, and the ESP could ask the student to demonstrate the technique. If that skill is not required as part of the current assessment, the ESP could provide the actual result or a photograph from the authentic patient's notes to manage the next section of the consultation. Real patients also provide powerful learning through their direct feedback to practitioners and students on their professionalism, empathy and skills in physical examinations, which the ESP also provides.

The ESP strategy's primary contrast to a traditional simulated patient is that the expert role-plays the patient while remaining the instructor. The latter's expertise allows for high-level judgements that meet pedagogical goals, ensuring that the ESP strategy always puts teaching and the student's learning needs first. For example, sometimes a student makes a clear error of knowledge, judgement or behavior that could have a significant effect on the outcome of the consultation, on other students in the group, or on the clinic's reputation. In this situation, the ESP employs a "time-out" ? moving openly back into instructor mode to intervene and provide professional support and guidance to the student ? before returning to the patient role. This approach reduces student anxiety about delayed feedback and ensures ESP consultations are authentic, interactive and immediately valuable learning experiences for all students while remaining safely within the simulation context.

The ESP approach helps students learn how to question and gently probe to discover details that may lead to appropriate diagnosis and treatment. Real patients may give answers that confuse students; whereas, while remaining true to the patient record, the ESP may choose to elaborate, quantify, clarify, or omit specific aspects of history (such as comorbidities) to maximize learning outcomes. For example, in one case the student asked the ESP role-playing a specific 80-year-old patient if the latter's adult child had been checked for macular degeneration. The ESP answered the question, showing the student the question was appropriate, even though that actual question had not been asked of the real patient on whom the role-play was based.

Importantly, as an ESP, the supervisor remains present in the consultation room with the student(s) throughout the consultation instead of moving between up to four patient consultation rooms at any given time. This ensures a much closer perspective on students' competencies. The ESP is constantly assessing the student throughout the consultation, including competency in examination techniques, and can provide comprehensive feedback immediately afterward. Setting a positive tone in establishing the case history is particularly important in LV examinations, and the ESP can give particularly valuable and highly specific feedback on a student's approach to the case history and clinical decision-making. From a first-person perspective as ESP, the instructor can encourage students to avoid a repetitive, interrogative approach ("Do you have cataracts? Do you have glaucoma? Do you have macular degeneration? Do you have high blood pressure?") and instead help them focus on more open and empathic questions ("Have you been diagnosed with any eye conditions ? cataracts, glaucoma?"). Importantly, in instructor role, the ESP can also guide students directly in professional best practice in giving bad news to a patient, for example, by explaining how to ask if the patient understands the outcome or has any questions ("Is this what you expected to hear?") or specifically teaching the SPIKES protocol, a multi-

step approach for delivering unwelcome diagnoses.[27]

As the ESP is experiencing the students' examinations first-hand rather than simply through observation, more opportunities appear for highly nuanced feedback on behavioral practice. For example, one ESP took a time-out to explain gently to a student how unpleasant it felt to have the student's face so very close during a visual field test. Although the student had already been observed performing this test by many instructors, no concerns had been raised previously. In instructor mode, the ESP explained that the extreme closeness may have been less obvious from a supervisor's usual side view. The student was very grateful to receive this feedback at a stage when changing the stance was still easy.

ESP consultations are fully logged and contribute to clinical logbooks in equivalence to a normal clinic session, with students' assessments addressed in the usual way. As the ESP activity is based on an authentic case, students may use that case to write their assignments and case reports. Evaluation using three independent markers showed that case reports on ESP cases provided outcomes and opportunities for learning to be demonstrated equivalent to cases based on real patients.

Training instructors in the ESP strategy has proved straightforward, and they report that teaching through ESP is rewarding and contributes to their development of advanced teaching capabilities and confidence. Given the premium rates paid to optometry professionals employed as sessional academics in face-to-face clinics, it also made economic sense to ensure these professionals could add significant value to students' learning even when patients did not arrive. Thus, administratively, the ESP strategy proved highly cost-effective and elegantly solved the clinic's problems with regard to no-show patients.

Shifting the ESP Strategy Online During the COVID-19 Pandemic

In March 2020, the COVID-19 pandemic forced full lockdowns in Sydney. On short notice, the UNSW-OC was closed as a face-to-face teaching clinic. This caused significant anxiety among students. They worried about the lack of clinical skills training and assessment and the possibility the course would be extended well beyond planned graduation dates, which would have significant implications for living/tuition costs and career prospects. Staff also faced multiple challenges. These included becoming competent themselves as telehealth practitioners,[28] transitioning their clinical teaching into fully online environments without access to patients, continuing to process patients' contact lens orders and mail prescribed spectacles, and communicating with anxious patients.

Fortunately, the ESP strategy was already well-developed at UNSW-OC by that time, and teaching staff were already comfortable with implementing it. As such, extending ESPs into the virtual world of online teaching proved viable and practicable. Just before leaving campus for lockdown, staff copied de-identified data from patient record cards to create a database of scripts for ESP consultations. Teaching timetables were re-organized, and students were allocated to virtual versions of clinics, tutorials and grand rounds. The virtual clinics were conducted with ESPs via the Blackboard Collaborate Ultra platform, which facilitated file- and video-sharing, immediate-response polls and group work "rooms."

In the usual face-to-face context, students and instructors would simply arrive at the clinic with the usual expectations of an on-campus clinical experience, whether or not ESP was needed. The preparatory logistics for the virtual ESP clinics were more complex. To help manage student well-being and anxiety alongside online/virtual clinic etiquette, preliminary communications were sent to all students. The messages explained how students would access the virtual clinic, including videoconferencing platform, internet, camera and microphone access. According to the university's equity and diversity policies, students were advised of the need for cameras, and that both their screen/room background and attire had to meet professional standards. For example, students who usually wear head coverings needed to treat the virtual clinics as external experiences, and those working from bedrooms needed to review their backgrounds. Special consideration, with no assessment penalties, was given to students who could not

participate fully in the professional virtual settings.

Using a flipped class pedagogy,[29,30] the introductory emails also gave students pre-clinic research topics relevant to their upcoming ESP case. In the LV virtual clinic, the research topics often included Australian requirements for a Conditional Driver's License and Disability Support Pension (Blind). During the virtual LV clinic, students would be asked to confirm whether the ESP (as patient) met the requirements for this license or pension.

In all virtual contexts, the emphasis was on student involvement and student-led activities with an ESP strategy. Instructors collaborated to keep ratios at 2:1 per session, although occasional limited availability gave rise to ratios of up to six students per instructor. In this situation, supervisors used time-outs for more formal switches from patient to instructor mode so they could act as ESP and teach effectively in the online environment. Control of the virtual clinic was also rotated to different students, so every student learned how to run the consultation in an authentic telehealth format. This approach smoothed communication as students had to request a time-out if they needed to ask the supervisor (not the patient) a question.

Once these online approaches were established, supervisors and students reported having clear and consistent understanding of their roles. An unexpected benefit from the slightly larger groups was that students modeled professional behavior for one another. That peer learning compensated for any higher than usual student-to-instructor ratios. Interactive engagement was reinforced by enabling students to ask questions or comment using diverse options, including voice audio, Blackboard Collaborate Ultra tools (whiteboard, online chat, virtual hand-raise), and direct comment onto PowerPoint slides. Any complex or difficult aspects of an ESP case were supported in instructor mode to ensure learners' needs were addressed.

In virtual clinics, the ESP focus is primarily on developing students' problem-solving and analytical diagnostic skills. The online instructor often directs a focus on non-clinical techniques relevant to examining eyes with pathology or older eyes, such as case history and case analysis. Nevertheless, some clinical skills can be effectively assessed with an online ESP, including quality of instructions for visual acuity tests ("cover your left eye and read the chart") and visual field testing (such as Amsler grid scoring and confrontation testing for ESPs reporting a restricted visual field). Being familiar with how patients with specific pathology typically respond, the instructor can mimic this when role-playing the patient. For example, the ESP might stop reading letters and wait to see if the student encourages them to continue trying. If the patient script refers to someone with macular dystrophy or macular degeneration, the ESP might read the first and last letter of a line, omitting the central three, and see how the student records that outcome and proceeds. Shifting into instructor mode allows direct feedback to be given to the student. Relevant clinical procedures that cannot be simulated, such as retinoscopy or trial frame refractions, are reviewed in interactive online tutorials before virtual clinics.

Even virtually, the ESP role-play fully engages students in professional behavior. Shown a photo of the clinic, students are asked to visualize the patient sitting in the waiting room and decide exactly how they would invite the patient into the clinical room. In this visualization, the students are asked to notice any health attributes of the patient, such as swollen fingers or use of a walking stick. In patient mode, the instructor can assess in quite subtle ways the instructions students give for specific tests (such as the student's choice of language, clarity and tone of voice). This level of immersion into the simulation adds to the authenticity of the learning and alleviates students' concerns that they are missing out on their clinical learning during virtual learning. Students receive feedback after each virtual clinic, which reinforces key learning concepts. All students have a LV patient record card they must complete to the same standard and with the same assessment components as for a face-to-face clinic, which they submit online after the virtual clinic. Other assessable components online are the same as those for face-to-face clinics, and students are advised of these in advance.

Outcomes

Although the COVID-19 pandemic encouraged optometry educators everywhere to develop teaching approaches with some similar characteristics,[31] the ESP strategy had already been well-developed and trialed as a pedagogy before 2020. However, during the pandemic, what had been designed as a fall-back approach for patient no-shows suddenly became the clinic's main teaching strategy. With ESP already well-tested, the shift online became a much more positive experience than might have been expected or that was experienced by some other university clinics.[13]

Overall, in the COVID-19 context we found the ESP strategy was excellent in enabling students to continue their clinical training in virtual environments. It also supported future professional life using telehealth consultations. Some UNSW-OC staff and students wrote about their experience[32] for mivision, the key communication and news portal for ophthalmic professionals in Australasia, giving their two perspectives:

Instructors: *… our online clinics allowed us to give our students thought-provoking cases at every online experience … Our students were able to practice finding their voice: having difficult conversations, giving clear instructions, and speaking appropriately to the patient and situation without jargon. … all virtual patient experiences were real cases that have come through our clinic doors. The mix of patients was valuable, and reflected real life, where you never know who or what is going to sit in your chair. (Instructors)*

Final-year students: *… our supervisors ran sessions of 'virtual patients' where they played two roles – as themselves and as a patient. The online learning experience brought an array of unanticipated enjoyment while still allowing us to grow in clinical knowledge. … real cases … challenged our deductive skills to come up with a diagnosis and management plan. We worked as a team … to come up with the best answer together. … we could see a variety of cases and become more efficient at clinical decision making, before seeing our real-life patients. This was also an opportunity to get more 'one-on-one' time with supervisors and … drown them with questions [which] is harder in a clinic setting where they are usually juggling several patients and students at the same time.*

When the campus clinic re-opened for COVID-safe face-to-face sessions, students reported that the ESP virtual clinics had prepared them well. Taking case histories online had prepared students effectively for optometry telehealth consultations, an approach given new prominence, scope and funding in Australia since the pandemic. Given the Australian government's new support and the significant constraints of travel to city-based teaching clinics for Australia's rural and remote patients, telehealth case histories were continued across all LV vision clinics in 2021 and have now been permanently introduced into all LV clinics.

The ESP strategy is clearly sustainable and applicable to diverse contexts. For example, in early 2022 a satellite LV clinic hosted by an industry stakeholder was re-opened after the COVID19 disruption and relocation. When this clinic had staff and students rostered for a usual clinic session (two appointments) but no patients were able to attend, the supervising optometrist was sent relevant anonymized patient records and instructed how to use the ESP strategy. Excellent outcomes were reported by both students and staff. The intangible benefits of having ESP available in this context were significant. Having the clinic remain open was a major strategic outcome, as it made excellent use of the sessional academics' professional expertise and funding; enabled the students to participate in a LV clinic, complete their assessments and have a case for later written assignments; and, crucially for ongoing relationships, allowed the industry stakeholder to bring optometry students onto its premises.

Conclusion

As an innovative extension of the simulated patient and “patient as teachers” models, the ESP strategy was specifically designed to support students in a university clinic’s teaching context where no-show or canceling patients were negatively affecting learning and management outcomes. Although real patients are always the ideal, having an ESP strategy in place has removed the teaching clinic’s dependency on scheduled patient attendance. Now when a patient is a no-show, the clinic’s supervisors can immediately engage in an ESP role-play. Students do not miss their rostered clinical experience sessions and assessments, and they still receive deep-layered formative feedback to improve their clinical practice. The ESP strategy has proven to have distinct pedagogical and economic advantages for clinical teaching, the student experience and the wider impact of the university clinic.

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